

MULTI-CONTEXT ITERATIVE DIRECTORY FILTER

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Background of the Invention

Cross-Reference to Related Applications

[0001] The present application claims priority from provisional U.S. Patent Application Serial No. 60/297,817 for "Handheld Device," filed June 11, 2001, the disclosure of which is incorporated herein by reference.

Field of the Invention

[0002] The present invention is related to retrieving directory records, and more particularly to multi-context iterative directory filter techniques including

1) concurrent operation in a directory filtering mode and a direct-dial mode, without requiring the user to specify which mode is intended; and 2) concurrent filtering based on two or more directory fields.

Description of the Background Art

[0003] Many handheld devices, such as personal digital assistants (PDAs), cellular telephones, laptop computers, and the like, provide electronic directories of contact information. Such directories are often capable of storing a large number of entries, or records, each corresponding to an individual or business. Many types of information may be stored in directory records, such as names, postal addresses, telephone numbers, e-mail addresses, and other contact information. Using an interface for interacting with the directory, users can add, edit, and delete records as needed, to keep the directory up to date.

[0004] Users may retrieve records stored in electronic directories in a variety of ways. The particular mechanics for retrieving directory records depend upon many factors, including for example the nature and purpose of the device, the hardware configuration and design of the device (including display, keyboard, and the like), the user interface of the directory software, the nature of the user's contemplated interaction with the device, the context in which the interaction takes place, the user's preferences and level of expertise in operating the device, and the like. Some common techniques for retrieving a directory record include: scrolling through a displayed list; searching for one or more keywords entered

by the user; pressing a key corresponding to an initial letter of the person's name; typing the first few letters of the person's name; and the like.

[0005] One technique for retrieving a directory record is iterative filtering.

The user enters letters in succession, and the device displays directory records that match the letters entered. As the user enters each letter, the number of displayed records is iteratively filtered, so that fewer and fewer records tend to be displayed. When only one record is displayed, it may be automatically selected. At any time during the iterative filtering, the user can navigate (e.g. by scrolling) among displayed records to select the desired record.

[0006] For example, suppose a directory contains the following records (among others):

[0007] - Rafferty, Janine

[0008] - Raiklen, Bill

[0009] - Rainey, Mark

[0010] - Rea, Stacy

[0011] - Sackman, Eric

[0012] A user seeking to retrieve the directory record for Bill Raiklen would enter each letter in the person's last name in sequence. After entering the first letter, "R", Eric Sackman's name would be filtered out (since it does not begin with "R"), leaving:

[0013] - Rafferty, Janine

[0014] - Raiklen, Bill